A FLORISTIC INVENTORY OF DAGNY JOHNSON KEY LARGO HAMMOCK BOTANICAL STATE PARK AND IMMEDIATELY ADJACENT LANDS (MONROE COUNTY), FLORIDA, U.S.A.

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ABSTRACT

Individuals of ninety-nine families, 302 genera, 417 species, and 421 infrageneric taxa of vascular plants grow wild in Dagny Johnson Key Largo Hammock Botanical State Park and on immediately adjacent lands (Key Largo, Monroe Co., Florida). Three hundred (71.3%) of the 421 infrageneric taxa are native to Florida. Herein, eight main kinds of habitats are recognized within the study area, and individual taxa inhabit one or more of these habitats. Fifty-nine presently reported species are listed as Endangered (38 species) or Threatened in Florida (21 species). For South Florida, one species listed as Extirpated and eight species listed as Critically Imperiled were documented during this study.

KEY WORDS: Dagny Johnson Park, Key Largo, floristic inventory, vascular plants

RESUMEN

Individuos de noventa y nueva familias, 302 géneros, 417 especies, y 421 taxa infragenéricos de plantas vasculares crecen nativos en Dagny Johnson Key Largo Hammock Botanical State Park y en lugares inmediatamente adyacentes (Key Largo, Monroe Co., Florida). Trescientos (71.3%) de los 421 taxa infragenéricos son nativos de Florida. Por ello, se reconocen ocho tipos principales de hábitats en el área de estudio, y los taxa individuales habitan uno o más de estos hábitats. Cincuenta y nueve de las especies citadas están listadas como En Peligro (38 especies) o Amenazadas en Florida (21 especies). Se documentan para South Florida en este estudio, una especie listada como Extinguida y ocho especies listadas como Críticamente Amenazadas.

INTRODUCTION

This is the fourth of a series of papers focused on the flora of south Florida (Wilder & McCombs 2006; Wilder & Roche 2009; Wilder & Barry 2012). Presented, herein, are the results of a floristic inventory of the native and the exotic taxa of vascular plants growing wild in Dagny Johnson Key Largo Hammock Botanical State Park and on immediately adjacent lands. We call the studied locations, collectively, "the study area." These locations are situated within northern Key Largo (Monroe Co., Florida). Key Largo ranks as the largest and among the northernmost of the Florida Keys (Weiner, 1977–1986).

Dagny Johnson Key Largo Hammock Botanical State Park (hereafter, called the Park) was established in 1982 and additional lands were added later on. The Park is managed by the State of Florida Department of Environmental Protection Division of Recreation and Parks (DEP). It exhibits diverse habitats, including the largest remnant of West Indian hardwood hammock (a kind of rockland hammock) remaining within the continental United States (SFDEPDRP 2004).

The Park consists of discontinuous properties that, collectively, define an approximately linear contour oriented from southwest to northeast (Fig. 1, areas depicted in green and orange). Privately owned lands and

associated roads occupy spaces between the Park properties. The Park is centered at 25°14'21"N and 80°19'12"W, it is ca. 7.3 miles long (including spaces between properties), it exhibits a maximum width of ca. 0.75 miles, and it occupies 2454 acres (SFDEPDRP 2004). The maximum altitude is ca. 13 feet above sea level.

Most of the Park is situated within an eastern sector of northern Key Largo (Fig. 1, area colored green). This portion of the Park is bounded to the east by the Straits of Florida (a body of water contiguous eastward with the Atlantic Ocean). To the west, this portion is demarcated, jointly, by three entities that are contiguous with, and that extend parallel to, one another (Fig. 1, the three entities are represented, collectively, by a single red line). Listed in an order extending from west to east, these entities include: (1) County Route 905 (CR 905), (2) ruderal land situated east of CR 905, and (3) a right-of-way that includes power lines. A discontinuous linear clearing extends beneath the power lines. The right-of-way is owned by Monroe County, but it is assigned as a utility easement to the Florida Keys Electric Cooperative (FKEC).

A northwestern sector of the Park is unique, because it occurs by the western side of CR 905 and because its western boundary abuts Card Sound (a body of water that connects, via Florida Bay, to the Gulf of Mexico; Fig. 1, area colored orange).

Those portions of the study area that lie immediately adjacent to, but that do not belong to, the Park include the linear clearing, aforementioned, certain ruderal lands, and oceanic habitat situated at the eastern terminus of Valois Blvd. (see below, for additional comment about the latter two portions).

Numerous botanists—independently or in small groups—have collected, and deposited in herbaria, voucher specimens from northern Key Largo. Examples of previous workers include: T.R. Alexander, F. Almeda, D. Austin, G.N. Avery, K.A. Bradley, C.R. Broome, G.R. Cooley, D.S. Correll, F.C. Craighead, J. De Boer, J.A. Duquesnel, G.D. Gann, O. Lakela, R.W. Long, J.E. Poppleton, R.P. Sauleda, A.G. Shuey, W.L. Stern, R.F. Thorne, P.B. Tomlinson, and D.B. Ward (Gann et al. 2002; IRC 2013; Wunderlin & Hansen 2013).

Taylor Alexander (1953, 1968 [1969]) wrote two papers about the vascular flora of the Park. The first paper was a floristic study of land that was initially pine rockland (land that was also studied presently). The second paper reported *Acacia choriophylla* (Fabaceae) as a species new to Florida.

Arthur Weiner (1977–1986) authored a voluminous monograph about the ecology of rockland hammocks of the Florida Keys. Therein, he presented, in part, the results of 26 surveys of different sectors of rockland hammock in Key Largo, that were undertaken by Weiner and Karen Anchor during/between May, 1977 and Feb. 1986. Weiner (1977–1986) included a separate plant list among the results of each survey.

After the Park was established, DEP staff members compiled lists of the plant species found there (SFDEPDRP 2004). The most recent list, not yet formally approved, was assembled while current research was still underway (SFDEPDRP, Unit Management Plan in preparation); that list reports certain species that were first observed by us in the study area. In addition, the Institute of Regional Conservation (IRC 2013) maintains a separate list of species attributed to the Park.

The present study was undertaken for four reasons. (**1**) Weiner's (1977–1986) plant lists and DEP's lists specified no voucher specimens, and the IRC list specified a limited number of them; thus, each list was impossible, or was possible only in part, to verify. (**2**) The Park list did not stipulate, and the IRC list stipulates inconsistently, which workers had identified particular species. (**3**) For many of the herbarium specimens collected by previous workers, the specimen labels did not specify—or they specified imprecisely—where in northern Key Largo (or in Key Largo, overall) collections were made; thus, it was not possible to definitely link such specimens to lands currently under investigation. (**4**) We aspired to document species previously unreported within the study area.

Voucher specimens or photographs are cited herein of all infrageneric taxa (species and varieties) reported presently. Indicated, also, are taxa collected by previous workers in northern Key Largo that were not observed during the present study. Reported, too, are the habitat(s) noted for each infrageneric taxon during current fieldwork.

Climate, Geology and Soils

Key Largo manifests long, hot, humid summers (with frequent cooling by sea breezes) and warm winters (with

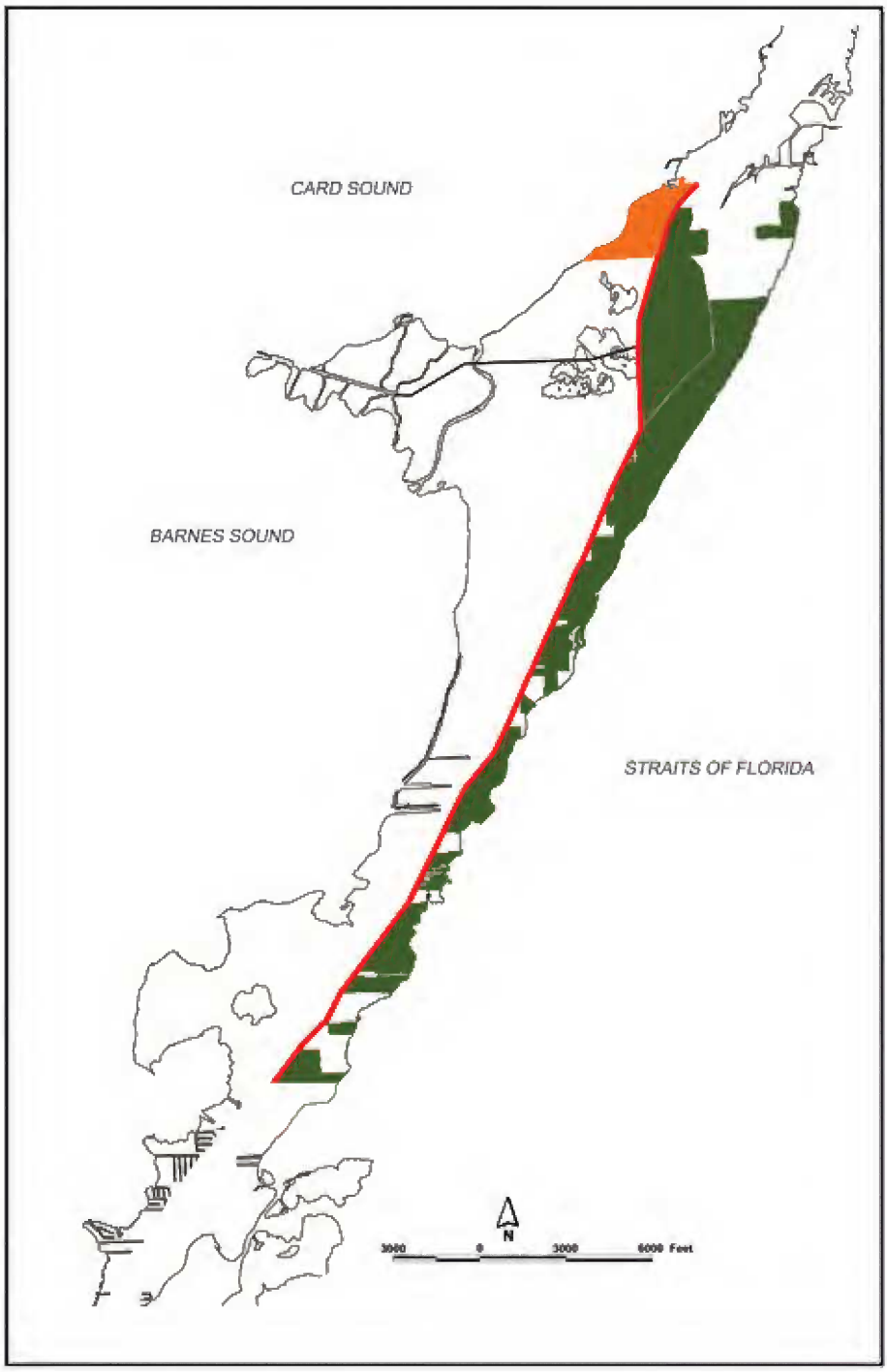

Fig. 1. Map depicting northern Key Largo and surrounding bodies of water. Green and orange signify the eastern portion and the northwestern portion, respectively, of Dagny Johnson Key Largo Hammock Botanical State Park. The red line represents, collectively, CR 905, ruderal land situated east of CR 905, and the right-of-way that includes power lines. This map is from State of Florida Department of Environmental Protection Division of Recreation and Parks (2004) and was modified by Nathan Mitchell.

occasional cooling by intrusions of air from the north). Average monthly temperatures vary from 75° F (January) to 90° F (July, August). Rainfall occurs throughout the year. Average precipitation is highest in September and is lowest from/including December through April (Hurt et al. 1995; The Weather Channel 2014).

Key Largo Limestone—a "raised coral reef" of Pleistocene origin—is the uppermost bedrock within Key Largo (Randazzo & Halley 1997). The limestone is eroded, and here and there large solution holes extend downward from its surface. The holes are commonly wider than deep, they may exceed five feet deep, and they may contain disproportionate numbers of individuals of particular plant species (*Acrostichum aureum, Annona glabra*). The holes develop naturally because of rainfall, and they sometimes hold standing water. Also, humans have excavated the limestone in places, producing basins and canals (SFDEPDRP 2004; George Wilder, personal observations).

Dispatch Slough, a body of shallow saltwater, extends through the northeastern sector of the Park and connects Card Sound with the Straits of Florida (SFDEPDRP 2004).

Six soil types occur within the study area: **(1)** Pennekamp gravelly muck, 0–2% slopes, extremely stony; **(2)** Matecumbe muck, occasionally flooded; **(3)** Rock outcrop, Tavernier complex, tidal; **(4)** Islamorada muck, tidal; **(5)** Keylargo muck, tidal; and **(6)** Udorthents-Urban land complex. Soil type nos. **1** and **2** are associated with upland and subtropical hardwood hammock; type nos. **3–5** occur within mangrove swamps, exhibit elevations of less than two feet, and are subject to daily flooding by tides; and type no. **6** occurs within "constructed upland areas adjacent to areas of water" (Hurt et al. 1995).

Habitats

Recognized, herein, are eight main kinds of habitats within the study area: rockland hammock, mangrove, rock barren, coastal berm, submerged habitat, ruderal land, the linear clearing situated beneath power lines, and non-ruderal disturbed land (Appendix 1).

Rockland hammock.—This is subtropical, upland forest. Its name signifies the underlying limestone, which either is exposed (especially in solution holes) or which lies very near the surface (FNAI 2010). In hammock situated within the study area, dicotyledons comprise the majority, both of individuals and of species, of trees and shrubs; however, one or more palm species also abound(s) in places. The hammock varies from being young second-growth forest to being older growth. A thick, soft layer of leaf litter characterizes the higher-quality portions of hammock.

Before the Park was established, a 15-acre tract - now situated within the northeastern sector of the Park - was pine rockland habitat; however, during the early 1900s the pines were logged and living pines are now absent (SFDEPDRP 2004). Subsequent to logging, renewed growth transformed this tract. Today most of it appears, essentially, as rockland hammock, and that majority is here classified as such.

Mangrove.—This is variously dense forest. It comprises fringing vegetation along the coast and also occurs sporadically a little inshore of the coast (where it may intergrade with rock barren). Too, it occupies Dispatch Slough. Four species of trees dominate: *Avicennia germinans* (Black Mangrove), *Conocarpus erectus* (Buttonwood), *Laguncularia racemosa* (White Mangrove), and *Rhizophora mangle* (Red Mangrove).

Rock barren.—Grouped together here, under this heading are three previously recognized habitat types: keys tidal rock barren, keys cactus barren, and portions of terrain elsewhere called a "rocky area of scrub mangroves" (by the SFDEPDRP 2004). The first two habitat types were described by the Florida Natural Areas Inventory (FNAI 2010).

The "portions of terrain," aforementioned, occur somewhat inshore of fringing mangrove habitat, they are insolated, they are relatively free of mangrove species, and they abound with *Batis maritima* and chenopodiaceous species. Aside from having rocky substrate, they resemble *Batis* marsh (a habitat which manifests marl soils; Craighead 1971). The three habitat types are grouped together here: (A) for purposes of simplicity, (B) because all are considerably insolated, (C) because certain species abound in all three types, and (D) because some of the types may abut one another (i.e., Keys cactus barren [which has slightly higher elevation] and the portions of terrain, aforementioned [which have slightly lower elevation]).

Rock barren is widespread at low elevations of the Park. Aside from occurring inshore of the coast, it lines

both sides of Dispatch Slough. The substrate is intact- or broken-up limestone. The least elevated parts of rock barren are commonly flooded, whereas flooding is infrequent in higher parts. Rock barren located by the western side of Dispatch Slough abuts rockland hammock to the west and mangrove habitat to the east.

The Florida Natural Areas Inventory (FNAI 2010) ranks the Park as an "exemplary site" for Keys tidal rock barren and, also, for coastal berm.

Coastal berm.—The Florida Natural Areas Inventory (FNAI 2010) defines coastal berm as "... a short forest or shrub thicket found on long narrow storm-deposited ridges of loose sediment ..." Within the Park a geographically limited, forested ridge of berm exists just landward of the fringing mangrove habitat. At high elevations (of ca. a few feet) leaf litter covers the surface, but massive quantities of trash surmount less elevated berm sectors (see below).

Submerged habitat.—Submerged, aquatic plant species were noted growing in ocean water (at the eastern terminus of Valois Blvd. [a road traversing a space between Park properties]), in Dispatch Slough, and within an excavated basin of limestone containing shallow water. The first location actually occurs within a peripheral-most portion of John Pennekamp Coral Reef State Park.

Ruderal land.—We define this in a strict sense as disturbed land bordering or on roads. Ruderal land was investigated (A) along the eastern side of CR. 905, (B) along roads penetrating the spaces between Park properties, and (C) along, and on, roads located within the Park.

The linear clearing situated beneath power lines.—This clearing extends for nearly the entire length of the Park; however, it is interrupted mainly at two places where the power lines extend especially close to CR 905. At those places the power lines overlie land confluent with, and outwardly indistinguishable from, ruderal land bordering CR 905. At those places land beneath the power lines is classified as ruderal land, rather than as part of the linear clearing. Most portions of the clearing are bordered on both sides by rockland hammock.

The linear clearing is mowed once yearly (personal communication from Sara Hamilton of FKEC, of 15 Aug 2013), so that herbaceous vegetation predominates. Depauperate woody plants occur, but the periodic mowings prevent them from becoming dominant. Because of their restricted development, it was considered misleading to list for the clearing—and we do not do so here—certain species of the depauperate woody plants (Appendix 1). Also, the clearing is mowed less frequently than are the ruderal lands associated with the Park, so that it often manifests more robust vegetation than do the ruderal lands.

Non-ruderal disturbed land.—This habitat includes variously extensive clearings within the Park. Concurrent with the present study, DEP acted to restore some clearings (by bulldozing and, sometimes, by applying mulch). Those efforts, apparently, promoted the arrival of certain species within the Park that were previously absent (*Ipomoea hederifolia, Trianthema portulacastrum*).

Flotsam-derived Trash

Massive trash accumulations clearly deposited during storms and/or high tides occur a little inshore from the Straits of Florida. These accumulations appear within portions of fringing mangrove habitat, of coastal berm at low elevation, and of rock barren. Trash includes glass bottles, plastic bottles, additional plastic objects (e.g., styrofoam slabs), buoys, ropes, metal cans, buckets, fishing gear, shoes, boards, poles, etc.

Historical Sketch

Northern Key Largo has a long history of human occupation and of human-induced disturbances. Native American Indians inhabited "Key Largo Hammock" between 1600 BC and 1200 AD, and they continued their activities there until the mid-18th century. Included, were members of the Calusa tribe, of Timucuan culture, and settlers from the Bahamas. Prehistoric Indian sites remain within the Park. They tend to be located near the water and mainly include shell middens (SFDEPDRP 2004).

The Spanish first explored the northern Florida Keys in 1516. Thereafter, and continuing throughout the 16th, 17th, and 18th centuries, certain species of hardwoods were logged aggressively within rockland hammock situated there. Examples included *Colubrina elliptica* (Soldierwood), *Eugenia rhombea* (Red Stopper), *Guaiacum sanctum* (Lignumvitae), *Hypelate trifoliata* (White Ironwood), and *Swietenia mahagoni* (Mahogany).

Logs were extracted, partly, for shipbuilding, home construction, and cabinetry (Rothing 2009; Weiner 1977–1986). Later on in northern Key Largo, *Pinus elliottii* (Slash Pine) and *Quercus virginiana* (Live Oak) were also logged (see below; Alexander 1953; SFDEPDRP 2004). Today, within the Park one may still observe in rockland hammock the old trunks of previously cut trees.

The first European settlers arrived during the mid-18th century.

During the 1800s, individuals established homesteads and farmed in northern Key Largo (SFDEPDRP 2004; Wilkinson 2013b). For example, Samuel Lowe purchased and homesteaded 900 acres of land. A farmer, he likely grew pineapples, a crop which most historians believe was then the crop of choice in the northern Florida Keys. If Lowe raised pineapples, he probably practiced slash-and-burn agriculture and cleared considerable land (Wilkinson 2013b). We emphasize Lowe, because his land would have been located partly or entirely within the current study area (a conclusion that we base on Wilkinson's [2013b] statement that Lowe's property encompassed land that was much later developed into a missile base [see below]).

During the 1900s, significant attempts were made to create housing developments within areas now incorporated within the Park. Two examples are provided. (1) The Port Bougainville site, the largest such area, encompasses ca. 100 acres within a southern sector of the Park. During the late 1970s and early 1980s this site was subjected to land clearing, road building, and the construction of lakes, a marina, various buildings, an entrance archway, a tunnel, etc. The site was subsequently restored somewhat, but it still exhibits considerable cleared land, roads, and additional artifacts. (2) The Carysfort Yacht Club site includes over 40 acres of land within a northern sector of the Park. That site was cleared to house the Carysfort Yacht Club, but was later utilized as a campground. A marina was also built. Subsequent restoration attempts entailed removal of the campground and marina, partial reforestation with native vegetation, and remodeling of the landscape (SFDEPDRP 2004).

In June 1965, nearly three years after the Cuban missile crisis, the U.S. government made operational the Key Largo HM-40 Nike Hercules missile base in northern Key Largo. That facility, which housed 120 individuals, was closed in June 1979. It had two main parts: the Integrated Fire Control area (radar/administrative area) and the Launcher area (which housed missiles in hardened storage bunkers). Today the two parts are separated by CR 905 and are situated within the Park and within the adjacent Crocodile Lake National Wildlife Refuge, respectively (Wilkinson 2013a, 2013b). Within the Park, the defunct Integrated Fire Control area occupies ca. 13 acres and manifests deteriorating buildings, pavement, and degraded habitat (SFDEPDRP 2004; George Wilder, personal observations). Hammock vegetation overgrows parts of the area.

The Park contains portions of two highways: Old CR 905 and Old Card Sound Rd. Below, we apply the names Old CR 905 and Old Card Sound Rd., solely, to those portions rather than to the entire highways. Old CR 905 and Old Card Sound Rd. are now closed to ordinary traffic. During the late 1960s, Old CR 905 (which demarcated the southern boundary of the Integrated Fire Control area) was replaced by a portion of CR 905 oriented west of Old CR 905 (Fig. 1, upper portion of red line). Also, Old Card Sound Rd. once extended eastward to the Straits of Florida, where it culminated in "Dynamite Docks" (a pier utilized for unloading and transporting explosives). Initially, Old CR 905 and Old Card Sound Rd. traversed Dispatch Slough at two separate locations; however, in 2000, roadway was removed at each location, and the locations are now submerged (SFDEPDRP 2004; Wilkinson 2013a, 2013b).

Plant-collecting combined with logging during the 20th century have also taken a toll (Roger Hammer, personal communications of 6 Jan and 10 Jan 2014). Weiner (1977–1988), referring to "upper keys high hammocks", including rockland hammock in Key Largo, commented as follows. There are "... very few remaining populations of lignum vitae, white ironwood, manchineel [*Hippomane mancinella*], soldierwood, red stopper, satinleaf [*Chrysophyllum oliviforme*] and other tropical hardwoods. Orchids and bromeliads ... are now represented by vestigial populations. The dollar orchid [*Prosthechea boothiana*] has all but disappeared. ... Populations of bromeliads are found in only the remotest and least accessible areas surveyed. All of these air plants are suffering from over-collection and habitat alteration." (Names between brackets were added by us.)

METHODS

The study area was visited 109 times, beginning on 19 March 2012 and ending on 20 Feb 2014. Multiple visits were made during each month of the year. George Wilder vouchered all but six infrageneric taxa with dried herbarium specimens; because of their rarity, Susan Kolterman vouchered those six taxa solely with numbered photographs (*Opuntia corallicola, Phoradendron rubrum, Prosthechea boothiana, Tillandsia fasciculata, Tillandsia utriculata,* and *Vanilla barbellata*). All specimens but one and all photographs were deposited in the Herbarium of Southwestern Florida (SWF), housed at the Naples Botanical Garden (Appendix 1). The exceptional specimen (of *Sida* sp., a species possibly new to Florida) was donated to the USF Herbarium (USF). Examined, also, were herbarium specimens that previous workers had collected, or had apparently collected, in northern Key Largo (at Virtual Herbarium 2013, at Wunderlin and Hansen 2013, at FTG, and at SWF). We inventoried solely wild individuals, i.e., plants which - except in three cases - were deemed to have originated naturally within the study area. Exceptional, were *Acacia choriophylla*, *Opuntia corallicola*, and *Phoradendron rubrum*; those species, extirpated from Key Largo years ago, were introduced into the Park by previous workers. We call the introduced plants wild because they grew in natural habitats, because they were not being maintained artificially, because some were robust and many years old, and because the three species were formerly native to Key Largo. Species are characterized as native, exotic, or endemic to Florida, according to Wunderlin and Hansen (2011, 2013). Mostly, present nomenclature follows Wunderlin and Hansen (2013); however, Appendix 1 (footnote 1) specifies nomenclatural differences between that work and the present paper.

RESULTS AND DISCUSSION

Taxonomic analysis of present data

The study area exhibited 99 families, 302 genera, 417 species, and 421 infrageneric taxa (species and varieties) of vascular plants (Appendix 1). Between parentheses, the numbers of families, genera, and infrageneric taxa are indicated, respectively, for each of the following major groups: pteridophytes (6, 10, 12), angiosperms (93, 292, 409), monocotyledons (14, 62, 102), and dicotyledons sensu lato (79, 230, 307). For infrageneric taxa of each of these major groups, their percentage of all 421 infrageneric taxa is listed: pteridophytes, 2.9%; angiosperms, 97.1%; monocotyledons, 24.2%; and dicotyledons sensu lato, 73.1%.

The five largest families of monocotyledons, as gauged by the numbers of infrageneric taxa present, are Poaceae (56), Cyperaceae (15), Arecaceae (8), Bromeliaceae (8), and Orchidaceae (5) (for each family the number of infrageneric taxa is listed between parentheses). The families Poaceae and Cyperaceae, collectively, exhibited 16.9% of all 421 infrageneric taxa listed (i.e., 71 infrageneric taxa).

The eleven largest families of dicotyledons sensu lato are Fabaceae (43), Asteraceae (29), Euphorbiaceae (21), Rubiaceae (16), Convolvulaceae (14), Malvaceae (9), Verbenaceae (8), Boraginaceae (7), Cactaceae (7), Scrophulariaceae (7), and Solanaceae (7). The families Fabaceae and Asteraceae, collectively, exhibited 17.1% of all 421 infrageneric taxa listed (i.e., 72 taxa).

No gymnosperms were observed, and pteridophytes were noted solely within the Park. Most fern species were rare or uncommon; however, numerous individuals were observed of *Acrostichum aureum* (localized primarily within solution holes) and of *Pleopeltis polypodioides* (localized within and bordering other portions of hammock).

Infrageneric taxa situated within the Park vs. on immediately adjacent land

Three hundred and eighty three infrageneric taxa (91.0% of all 421 infrageneric taxa reported) occurred solely within the Park or both within, and external to, the Park. The remaining 38 taxa grew solely outside of the Park. Of all 143 infrageneric taxa reported presently for ruderal land, 63 taxa grew on ruderal land that was located either solely within the Park or that occurred both within, and external to, the Park; the remaining 80 taxa inhabited ruderal land located solely outside of the Park.

Infrageneric taxa and habitats

Habitats are listed for all 421 infrageneric taxa reported here (Appendix 1).

Within the entire study area, non-ruderal disturbed land exhibited the highest percentage of infrageneric taxa. Intermediate percentages of taxa grew in each of rockland hammock and ruderal land. Lowest percentages occurred within each of the linear clearing situated beneath power lines, berm, rock barren, mangrove habitat, and underwater habitat.

Supporting data are presented. Each number, below, refers solely to the infrageneric taxa that we noted inside of a habitat, not to taxa whose sole association with the habitat was occurence at the habitat boundary. For each habitat indicated, listed between parentheses are the number of infrageneric taxa observed therein and the percentage which that number represents of all 421 infrageneric taxa reported here: non-ruderal disturbed land (231; 54.9%); rockland hammock (143, 34.0%); ruderal land (143, 34.0%); the linear clearing situated beneath power lines (87, 20.7%); berm (56, 13.3%); rock barren (52, 12.4%); mangrove habitat (34, 8.1%); and underwater habitat (3, 0.71%).

Also, noted were (A) 50 infrageneric taxa situated at the boundaries between rockland hammock and other habitats, that were not located inside the hammock itself, and (B) 27 infrageneric taxa situated at the boundaries between mangrove habitat and other habitats (excluding rockland hammock), that were not located inside the mangrove habitat itself (Appendix 1).

As was stated above, most of that locale which in previous years was pine rockland is classified presently as rockland hammock. (Hereafter, we designate as Locality **A** that portion which is now hammock). Accordingly, we have—in the previous two paragraphs—subsumed within the tallies of taxa of rockland hammock the counts of all taxa situated within Locality **A**.

Sixty-seven infrageneric taxa were noted as being situated within, or in several cases bordering, Locality **A** (Appendix 1). Although, Locality **A** is currently interpreted as rockland hammock, that locality differs from other hammock within the study area, because certain species characteristic of pine rockland persist there. Within the study area, those species are either confined to Locality **A** (*Quercus virginiana, Serenoa repens*) or they are represented there disproportionately (*Byrsonima lucida, Myrica cerifera*).

Approximately, 60 years ago Taylor Alexander, together with a plant ecology class, investigated Locality **A.** They delineated an east-west transect through Locality **A,** along which they recorded 25 species (Alexander 1953). Noted, presently within Locality **A** were 22 of those 25 species. Two more of the species were observed elsewhere in the Park (*Guettarda scabra, Simarouba glauca*); however, Alexander (1953) listed one species, *Psychotria sulzneri*, that was not observed presently within the study area. Coordinate with present findings, Alexander (1953) reported that Locality **A** "... showed little difference ..." from other areas of typical Key Largo hammock.

Native and endemic taxa inventoried during the present study

Within the study area 300 (71.3%) of the 421 infrageneric taxa recorded were native to Florida (this calculation does not include *Chenopodium* sp., which was insufficiently mature to identify). Between parentheses, the number and percentage of native infrageneric taxa within each major group of vascular plants are listed, respectively: pteridophytes (10, 83.3%), angiosperms (290, 70.9%), monocotyledons (66, 64.7%), and dicotyledons sensu lato (224, 73.0%).

Five taxa were endemic to Florida: *Agave decipiens, Argythamnia blodgettii, Chamaesyce conferta, Harrisia fragrans,* and *Opuntia corallicola.*

Exotic species inventoried during the present study

One hundred and twenty-one infrageneric taxa observed within the study area are exotic within Florida (not counting *Chenopodium* sp.; Appendix l).

The Florida Exotic Pest Plant Council (FLEPPC 2013) has recognized two categories of plant species exotic within Florida, that pose especial threats to the ecology of the State, overall, i.e., Category I and Category II (those categories indicate decreasing degree of threat; FLEPPC 2013). Noted presently were 16 Category I species (*Albizia lebbeck, Asparagus aethiopicus, Casuarina equisetifolia, Colubrina asiatica, Ficus microcarpa, Jasminum dichotomum, Lantana camara, Manilkara zapota, Melinis repens, Nephrolepis brownii, Neyraudia reyn-*

audiana, Panicum repens, Pennisetum purpureum, Scaevola taccada, Schinus terebinthifolia, and *Thespesia populnea*) and 19 Category II species (*Cocos nucifera, Dactyloctenium aegyptium, Eulophia graminea, Flacourtia indica, Hyparrhenia rufa, Leucaena leucocephala, Macroptilium lathyroides, Panicum maximum, Pennisetum setaceum, Pteris vittata, Richardia grandiflora, Ricinus communis, Ruellia blechum, Sansevieria hyacinthoides, Sphagneticola trilobata, Stachytarpheta cayennensis, Terminalia catappa, Tradescantia spathacea*, and *Tribulus cistoides*).

Possibly, there were four additional Category II species: *Chamaedorea seifrizii, Phoenix reclinata, Pittosporum pentandrum,* and *Washingtonia robusta*. We did not identify those species, but we did observe sterile plants or seedlings that are identified here as *Chamaedorea* sp., *Phoenix* sp., *Pittosporum* sp., and *Washingtonia* sp. The 16 Category I species and the 19 Category II species comprised 20.8% and 23.5% of all 77 Category I species and 81 Category II species recognized for Florida, respectively.

Within the study area *Leucaena leucocephala, Manilkara zapota,* and *Thespesia populnea* ranked among the most abundant of exotic species listed by FLEPPC (2013). *Eulophia graminea*, a Category II species native to Asia and to subtropical islands in the Pacific Ocean, was first observed in Florida in ca. 2006 (Pemberton et al. 2008). Since its discovery in south Florida, *E. graminea* has spread invasively there, and during the present investigation it has become considerably more abundant within the study area.

Staff members of DEP and of FKEC, as well as individuals unaffiliated with those entities, routinely destroy exotic plants within the study area. They have, apparently, extirpated *Bucida buceras* × *Bucida spinosa, Peltophorum pterocarpum* (two taxa that were previously listed for the Park [SFDEPDRP 2004]), *Hylocereus undatus,* and *Melia azedarach*.

Native species listed as rare in Florida

The study area manifests an extraordinary number of rare species (Table 1). Fifty-nine presently reported species are State-listed as Endangered (38 species) or Threatened in Florida (21 species; Weaver & Anderson 2010). Within the study area, all but one of these species are confined to the Park; *Argythamnia blodgettii*, the sole exception, comprises a small, localized population located in/by the linear clearing situated beneath the power lines. For South Florida, one species listed as Extirpated and eight species listed as Critically Imperiled (Gann et al. 2002) were documented during this study.

Herein, two listed species are newly reported for the Park: *Celosia nitida* and *Vallesia antillana*.

Two species of Cactaceae are State-listed: *Acanthocereus tetragonus* and *Harrisia fragrans*. Excluding cacti, 38 of the State-listed species grow as shrubs (including *Phoradendron rubrum*) or trees (including *Thrinax* spp.); however, other species develop as erect herbs (*Acrostichum aureum, Argythamnia blodgettii, Prosthechea boothiana, Tillandsia* spp., *Scleria lithosperma, Voyria parasitica*) or as herbaceous- or woody vines (*Dalbergia brownei, Jacquemontia* spp., *Microgramma heterophylla, Passiflora multiflora, Rhynchosia swartzii, Vanilla barbellata*).

Four of the State-listed species are considered in greater detail, below.

Acacia choriophylla.—Taylor Alexander reported a single tree of *A. choriophylla*, apparently of natural origin, in northern Key Largo. The discovery area was "... forested by species of West Indian affinity" ... and was "... typical of the ecotone between salt water mangrove swamps and high hammock..." (Alexander 1968 [1969]). His report was the first and only indication that *A. choriophylla* is native to the United States; however, Gann et al. (2002) concluded that *A. choriophylla* was likely extirpated in northern Key Largo during the 1970s and early 1980s. Many years ago a Park biologist planted the individuals of *A. choriophylla* reported presently.

Hippomane mancinella.—Ten years ago SFDEPDRP (2004) reported fewer than twelve individuals of this species in the Park. Observed, during the present study were only one mature individual and several seedlings of that species that grew beneath it. The plants were situated within berm habitat. *Hippomane mancinella* is poisonous to humans, a circumstance that has led to dramatic human-induced destruction of this species. Thus, within Florida *H. mancinella* is now "... only sparsely scattered throughout the Keys as well as near Flamingo in Everglades National Park" (Nelson 1994).

Table 1. List of the species of rare plants of Dagny Johnson Key Largo Hammock Botanical State Park and immediately adjacent lands. Rankings of rarity are for Florida (Weaver & Anderson 2010) and for south Florida (Gann et al. 2002). **Crit. Imp.** = critically imperiled; **End.** = endangered; **Ext.** = extirpated; **Hist.** = historical; **Threat.** = threatened.

Taxon	Weaver & Anderson (2010)	Gann et al. (2002)
Acacia choriophylla	End.	Ext.
Acanthocereus tetragonus	Threat.	
Acrostichum aureum	Threat.	
Argusia gnaphalodes	End.	
Argythamnia blodgettii	End.	
Bourreria succulenta	End.	
Byrsonima lucida	Threat.	
Calyptranthes pallens	Threat.	
Calyptranthes zuzygium	End.	
Canella winterana	End.	
Celosia nitida	End.	
Chrysophyllum oliviforme	Threat.	
Colubrina elliptica	End.	
Crossopetalum ilicifolium	Threat.	
Crossopetalum rhacoma	Threat.	
Dalbergia brownei	End.	
Dodonaea elaeagnoides	End.	
Drypetes diversifolia	End.	
Drypetes lateriflora	Threat.	
Erithalis fruticosa	Threat.	
Ernodea cokeri	End.	Crit. Imp.
Eugenia confusa	End.	
Eugenia rhombea	End.	Crit. Imp.
Exostema caribaeum	End.	
Gossypium hirsutum	End.	
Guaiacum sanctum	End.	Crit. Imp.
Harrisia fragrans	End.	
Hippomane mancinella	End.	
Hypelate trifoliata	End.	
Jacquemontia havanensis	End.	Crit. Imp.
Jacquemontia pentanthos	End.	
Jacquinia keyensis	Threat.	
Manilkara jaimiqui	Threat.	
Maytenus phyllanthoides	Threat.	
Microgramma heterophylla	End.	
Opuntia corallicola	End.	Crit. Imp.
Opuntia stricta	Threat.	
Passiflora multiflora	End.	
Phoradendron rubrum	End.	Crit. Imp.
Pithecellobium keyense	Threat.	
Prosthechea boothiana	End.	
Psychotria ligustrifolia	End.	
Reynosia septentrionalis	Threat.	
Rhynchosia swartzii	End.	Crit. Imp.
Schaefferia frutescens	End.	
Scleria lithosperma	End.	
Smilax havanensis	Threat.	
Solanum donianum	Threat.	
Swietenia mahagoni	Threat.	
Thrinax morrisii	Threat.	
Thrinax radiata	End.	
Tillandsia balbisiana	Threat.	
Tillandsia fasciculata	End.	
Tillandsia flexuosa	Threat.	
Tillandsia utriculata	End.	
Trema lamarckiana	End.	
Vallesia antillana	End.	Crit. Imp.
Vanilla barbellata	End.	
Voyria parasitica	End.	

Phoradendron rubrum.—Plants of *P. rubrum* parasitize stems of *Swietenia mahagoni*. During March, 1998, Josef Nemec discovered a previously unknown population (here called Population A) of *P. rubrum* within the Park; it was the last remaining original population known to occur there. Janice Duquesnel collected seeds from that population and planted them onto mahogany trees situated within the Park and elsewhere. The seeds yielded numerous offspring that persist today. Population A itself died-out in 2004, concomitant to death of the host trees.

Gann et al. (2002) concluded that wild plants of *P. rubrum* were known with certainty from South Florida, solely, from the Park; however, in 2002, IRC staff members discovered *P. rubrum* on Sands Key (Miami-Dade Co., FL; SFDEPDRP 2004). Subsequently, in May 2013, Larry Manfredi discovered *P. rubrum* growing at another site in Key Largo.

Opuntia corallicola.—John K. Small (1930) reported *O. corallicola* from Key Largo, but thereafter the species was extirpated there. Subsequently, staff members of Fairchild Tropical Botanic Garden (particularly, Christopher Kernan), of the Florida Park Service (including Janice Duquesnel), and of other institutions collaborated to introduce plants of *O. corallicola* into the Park. To the present day, Janice Duquesnel—with the assistance of other individuals—monitors *O. corallicola and Phoradendron rubrum* within the Park.

Gann et al. (2002) reviewed the history of discovery of *O. corallicola* in south Florida, and they indicated efforts to introduce that species in other Florida Keys.

Taxa that are rare or localized within the study area

One hundred and twenty-nine infrageneric taxa (30.6% of all infrageneric taxa reported presently) are judged to be rare within the study area (Appendix 1). We deem a taxon to be rare there (**A**) if no more than five individuals, thereof (or five clumps of individuals, in the case of herbaceous species), were observed, or (**B**) if, regardless of the number of individuals observed, the species occupied an area not larger than a housing lot.

Twelve native species are listed here as rare, that were also characterized above as Endangered or Threatened in Florida (Weaver & Anderson 2010) or as Critically Imperiled in south Florida (Gann et al. 2002): *Acacia choriophylla, Argythamnia blodgettii, Celosia nitida* (1 to several), *Crossopetalum ilicifolium, Eugenia rhombea, Hippomane mancinella, Jacquemontia havanensis, Jacquemontia pentanthos, Solanum donianum* (1), *Trema lamarckiana* (1), *Vallesia antillana* (2), and *Vanilla barbellata* (the numbers between parentheses indicate the number of individuals noted presently for certain species). Another species, *Sporobolus pyramidatus,* is not classified as Endangered, Threatened, or Critically Imperiled, but is rare in the study area and was also considered rare in Florida, overall (Wunderlin & Hansen 2011).

In contrast to the aforementioned species, various native/non-native species that are rare in the study area vary from occasional to frequent in Florida, overall (e.g., *Amaranthus spinosus, Ambrosia artemisiifolia, Chamaecrista nictitans, Cyperus flavescens, Echinochloa colona, Eclipta prostrata, Eleocharis flavescens, Erechtites hieraciifolius, Erythrina herbacea, Gaura angustifolia, Launaea intybacea, Leptochloa fusca subsp. fascicularis, Monanthochloe littoralis, Muhlenbergia capillaris, Oldenlandia corymbosa, Nephrolepis exaltata, Pilea microphylla, Solanum americanum, Sonchus asper,* and *Toxicodendron radicans* (Wunderlin & Hansen 2011).

Some native species that are not rare within the study area exhibit conspicuously restricted distributions, therein. (**1–4**) *Eugenia confusa, Schoepfia chrysophylloides, Thrinax morrisii*, and *Thrinax radiata* are limited to rockland hammock situated within the northern portion of the Park (excluding planted individuals of *T. radiata* that grow on a plot of disturbed land located elsewhere within the study area); (**5**) *Tillandsia setacea* is confined to the northwestern sector of the Park, where plants grow at/near the boundary between mangrove habitat and rockland hammock; (**6**) *Argusia gnaphalodes* grows wild within disturbed land on a spoil island bordering the Straits of Florida (albeit, apparently planted individuals occupy disturbed land situated elsewhere); (**7**) *Harrisia fragrans* grows primarily at/near the boundary between rockland hammock and either mangrove habitat or rock barren; and (**8**) *Ernodea cokeri* is confined almost entirely within/along that portion of rockland hammock that was formerly pine rockland (Locality **A**).

Comparisons with previous studies

Examined at FTG and USF, collectively, were herbarium specimens of 26 species and one hybrid that were not currently observed within the study area, but that previous workers had collected, or had apparently collected, in northern Key Largo (imprecise language on some herbarium-specimen labels made it uncertain whether the corresponding specimens were from northern Key Largo; Appendix 1). According to the labels, overall, of the 27 taxa, specimens of solely five species and of the hybrid were collected within the Park: *Ayenia euphrasiifolia*, *Cyperus croceus*, *Datura metel*, *Pectis* ×*floridana*, *Thelypteris kunthii*, and *Vitex trifolia*. We could not ascertain whether any other of the 27 taxa were collected from the study area. Fifteen (55.5%) of the 27 taxa are native to Florida.

SFDEPDRP (2004) listed 347 infrageneric taxa of vascular plants for the Park. Documented, presently were all but 34 (9.8%), but possibly up to 37, of those taxa (this imprecision reflects the uncertain identifications of some taxa). Of those 34 taxa, nine (26.4%) were native to Florida; remaining taxa were listed as nonnative or cultivated. The Institute for Regional Conservation (IRC 2013) maintains a database that summarizes previous floristic work undertaken within the Park and which reports ca. 458 species of vascular plants for the Park. Documented, during current research were 339 to 345 of those species (six species of four genera were questionable, because we observed solely sterile adults or seedlings of those genera).

The nature of the data assembled here differs in certain ways from that provided by the latter two sources—a circumstance which helps to explain the differences in the numbers of taxa reported presently and by those sources. **A.** Inventoried, presently were taxa located both within the Park and on immediately adjacent land, whereas, both other sources listed taxa solely for the Park. **B.** Taxa that grew solely under cultivation are not reported presently, whereas, both other sources reported such taxa. **C.** Our inventory is conclusive. In contrast, the IRC database lists certain species as present, but describes other species as being reported (24), as assumed to be present (10), as doubtfully present (5), as recorded as present in error (12), as possibly extirpated (6), and as presumed extirpated (13). (Each number between parentheses is the number of species that IRC assigns to the associated descriptor, that were not presently observed and/or that could not presently be identified with certainty [the six species, aforementioned]).

The aforementioned differences in the numbers of reported taxa also reflect the circumstance that certain taxa, apparently, died-out in, or were extirpated from, the study area before current research began. For example, we repeatedly visited the original collection locality of *Ayenia euphrasiifolia* (i.e., the Integrated Fire Control area), but we never observed that species. We speculate that it was shaded-out by growing woody vegetation. At least one species first recorded for the Park during current research, *Turbina corymbosa*, was inadvertently extirpated there during restoration efforts by DEP.

APPENDIX 1[1]

Table of species, varieties, a hybrid, and higher-level taxa documented during the present study and by previous workers. Non-bold font signifies infrageneric taxa (species and varieties) documented within the study area during the present investigation. Infrageneric taxa that previous workers documented, or apparently documented in northern Key Largo, overall, but that were not observed during the present study are listed with bold font. For certain species, listed after a species name is/are a relevant synonym (between brackets), an indication of whether the species is rare within the study area, and/or the designation of the species by the Florida Exotic Plant Pest Council (FLEPPC 2013). Presented after a species name is the five-digit Wilder and McCombs collection number[2] of a voucher specimen or of a voucher photograph of that species. Habitat data are provided within the eight vertical columns at the right of this table. For infrageneric taxa documented solely by previous investigators, data are provided as follows after the Latin name of a taxon: relevant synonym, if any (between brackets); collector(s); collection number; year of collection; and acronym of the herbarium where the specimen is on deposit.[3] After the name of each family and suprafamilial taxon, between parentheses are included two or four numbers; the two numbers not in italics—if present—signify, respectively, the numbers reported presently of genera and infrageneric taxa within that family or suprafamilial taxon; the two numbers in italic—if present—signify, respectively, the sums of numbers reported presently and by previous workers, of such genera and infrageneric taxa. * = alien to Florida; ? = a taxon that was not identified with sufficient precision to ascertain whether it is native to, or exotic within, Florida; ¤ = endemic to Florida; **Berm** = berm habitat; **Dist** = non-ruderal disturbed land; FLEPPC I and FLEPPC II = taxa recognized as Category I or Category II species by the Florida Exotic Plant Pest Council (2013); **Man** = mangrove habitat; **Pow** = linear clearing beneath power lines; **RH** = rockland hammock; **Rock** = rock barren; **Rud** = ruderal land; **Subm** = underwater habitat; X = occurrence of a taxon within a habitat, away from a habitat boundary (except for X^{bp} and X^{pi}). For ruderal land, X signifies occurrence on ruderal land within the Park, whereas, X^{bp} signifies occurrence on ruderal land outside of the Park; for rockland hammock, X^{pi} signifies rockland hammock which was pine rockland prior to the onset of current research. The following symbols signify occurrences at habitat boundaries: X^{d} = boundary with non-ruderal disturbed land; X^{man} = boundary with mangrove habitat; $X^{pi\text{-}man}$ =

boundary between mangrove habitat and rockland hammock that was formerly pine rockland; $X^{pi\text{-}r}$ = boundary between ruderal land and rockland hammock that was formerly pine rockland; $X^{pi\text{-}rb}$ = boundary between rock barren and rockland hammock that was formerly pine rockland; X^{po} = boundary with linear clearing beneath power lines; X^{r} = boundary with ruderal land; X^{rb} = boundary with rock barren.

[1] We follow the nomenclature of Wunderlin and Hansen (2013), with two exceptions. (1) We recognize families which they submerged within, or divided into, other families. Between parentheses, after the name of each family that we recognize is listed the corresponding family(ies) of Wunderlin and Hansen (2011): Asclepiadaceae (Apocynaceae), Capparaceae (Brassicaceae), Chenopodiaceae (Amaranthaceae), Euphorbiaceae (Euphorbiaceae *sensu stricto*, Phyllanthaceae, Putranjivaceae), Scrophulariaceae (Orobanchaceae, Plantaginaceae, Scrophulariaceae *sensu stricto*), and Sterculiaceae (Malvaceae). (2) We recognize varieties of *Conocarpus erectus* L., *Digitaria ciliaris* (Retz.) Koeler, *Eragrostis ciliaris* (L.) R. Br., *Paspalum setaceum* Michx, and *Schizachyrium sanguineum* (Retz.) Alston as did Long and Lakela (1976), Wipff (2003a), Peterson (2003), Allen and Hall (2003), and Wippf (2003b), respectively. Wunderlin and Hansen (2011) did not do so.

[2] Ms. Martha McCombs contributed importantly to SWF; hence, on the label of each herbarium sheet from SWF George Wilder's name and Martha McCombs' name precede the collection number of each specimen, a circumstance not duplicated in this appendix.

[3] Data for previous collections were compiled from Virtual Herbarium (2013), from Wunderlin and Hansen (2013), and during visits to FTG and USF.

	RH	Man	Rock	Rud	Pow	Dist	Subm	Berm
PTERIDOPHYTES (10, 12; *11, 13*)								
DENNSTAEDTIACEAE (1, 1)								
Pteridium aquilinum var. *caudatum* (L.) Sadeb.; 34212	X^{pi}					X		
NEPHROLEPIDACEAE (1, 2)								
Nephrolepis exaltata (L.) Schott; **Rare;** 34468	X^{pi}							
Nephrolepis brownii* (Desv.) Hovenkamp & Miyam.; remnant of cultivation; **Rare; 33548						X		
POLYPODIACEAE (4, 4)								
Campyloneurum phyllitidis (L.) C. Presl; **Rare;** 34416	X							
Microgramma heterophylla (L.) Wherry; 34527	X							
Phlebodium aureum (L.) J. Sm.; 34366	X,X^{man},X^{pi}							
Pleopeltis polypodioides (L.) E.G. Andrews & Windham; 33622	X,X^{man},X^{pi},X^{rb}							
PSILOTACEAE (1, 1)								
Psilotum nudum (L.) P. Beauv.; 34498	X,X^{pi}					X		
PTERIDACEAE (2, 3)								
Acrostichum aureum L.; 34255	X,X^{pi}	X						
Acrostichum danaeifolium Langsd. & Fisch.; **Rare;** 34467	$X^{pi\text{-}m}$							
**Pteris vittata* L.; FLEPPC II; 33816						X		
THELYPTERIDACEAE (*1, 1*)								
***Thelypteris kunthii* (Desv.) C.V. Morton; G.A. Gann, J.A. Duquesnel 1154; 2003 (FTG)**								
VITTARIACEAE (1, 1)								
Vittaria lineata (L.) Sm.; 34470	X, X^{pi}							
MONOCOTYLEDONS (62, 102; *64, 108*)								
AGAVACEAE (2, 2; *2, 3*)								
¤ *Agave decipiens* Baker; **Rare;** 33875	X							
****Agave sisalana* Perrine; R.W. Long, F. Almeda, J. De Boer, C.R. Broome 1860; 1966 (USF)**								
Yucca aloifolia L.; 33876	X,X^{pi}					X		
AMARYLLIDACEAE (1, 1)								
Hymenocallis latifolia (Mill.) M. Roem.; 33853	X^{d}				X	X		X
ARECACEAE (7, 8)								
Chamaedorea* sp. (sterile); **Rare; 34244	X							
**Cocos nucifera* L. (seedlings); FLEPPC II; 34957	X^{r}							X
Phoenix* sp. (sterile); **Rare; 35409	X							
Sabal palmetto (Walter) Lodd. ex Schult. & Schult. f.; 33546	X, X^{pi}							X
Serenoa repens (W. Bartram) Small; 34214	X^{pi}							
Thrinax morrisii H. Wendl.; 33511	X, X^{pi}							
Thrinax radiata Lodd. ex Schult. & Schult. f.; 34820	X							
Washingtonia* sp. (seedlings); **Rare; 35237						X		
ASPARAGACEAE (1, 1)								
Asparagus aethiopicus* L.; **Rare; FLEPPC I; 33736	X							

	RH	Man	Rock	Rud	Pow	Dist	Subm	Berm
ASPHODELACEAE (*1, 1*)								
***Aloe vera* L.; R.W. Long, F. Almeda, J. DeBoer, C.R. Broome 1859; 1966 (USF)**								
BROMELIACEAE (1, 8)								
Tillandsia balbisiana Schult. & Schult. f.; 34838	X,X^{man},X^{pi}	X	X					
Tillandsia fasciculata Sw.; 35497 (photograph)	X,X^{pi},X^{rb}	X	X					
Tillandsia flexuosa Sw.; 34410	X^{pi}	X,X^{r}	X					
Tillandsia paucifolia Baker; 34411	X^{pi}	X	X					X
Tillandsia recurvata (L.) L.; 34504		X	X					X
Tillandsia setacea Sw.; 34800	X,X^{man}	X						
Tillandsia usneoides (L.) L.; 33735	X,X^{pi},X^{r}	X	X					
Tillandsia utriculata L.; 35498 (photograph)	X^{pi},X^{rb}	X	X					
COMMELINACEAE (1, 1)								
**Tradescantia spathacea* Sw. [*Rhoeo discolor* (L'Hér.) Hance]; FLEPPC II; 33718	X					X		
CYMODOCEACEAE (1, 1)								
Halodule wrightii Asch.; 34167							X	
CYPERACEAE (5, 15; *5, 16*)								
Cladium jamaicense Crantz; 33455	X^{pi}	X	X					
Cyperus compressus L.; **Rare;** 33822				X				
***Cyperus croceus* Vahl; G.A. Gann, J.A. Duquesnel 1146; 2003 (FTG)**								
**Cyperus esculentus* L.; 34280				X^{bp}		X		
Cyperus flavescens L.; **Rare;** 33986				X				
Cyperus ligularis L.; 33657						X		
Cyperus odoratus L.; **Rare;** 33987				X		X		
Cyperus ovatus Baldwin [*Cyperus retrorsus* Chapm.]; 34801				X^{bp}				
Cyperus planifolius Rich.; 33951	X^{r}					X		
Cyperus polystachyos Rottb.; 33348						X		
**Cyperus rotundus* L.; 34105						X		
Eleocharis flavescens (Poir.) Urb.; **Rare;** 34098				X^{bp}				
Eleocharis geniculata (L.) Roem. & Schult.; **Rare;** 35500				X				
Fimbristylis cymosa R.Br.; 33349				X		X		
Fimbristylis spadicea (L.) Vahl [*Fimbristylis castanea* (Michx.) Vahl]; 33588	X^{pi}		X			X		
Scleria lithosperma (L.) Sw.; 34903	X			X^{bp}	X	X		
HYDROCHARITACEAE (1, 1)								
Thalassia testudinum Banks & Sol. ex J. König; 34168							X	
ORCHIDACEAE (5, 5)								
Encyclia tampensis (Lindl.) Small; 33826	X,X^{pi}	X	X					
**Eulophia graminea* Lindl.; 33658	X			X^{bp}		X		
**Oeceoclades maculata* (Lindl.) Lindl.; 33827	X,X^{pi}			X^{bp}		X		X
Prosthechea boothiana (Lindl.) W.E. Higgins; 35496 (photograph)	X,X^{pi}							
Vanilla barbellata Rchb. f.; **Rare;** 35499 (photograph)	X							
POACEAE (34, 56; *35, 59*)								
Andropogon glomeratus (Walter) Britton et al.; 33925		X^{r}				X		
Andropogon virginicus L.; 34101	X^{r}			X				
Aristida purpurascens Poir.; 34213				X	X			
**Bothriochloa ischaemum* (L.) Keng; 33926				X^{bp}	X	X		
**Bothriochloa pertusa* (L.) A. Camus; 33449				X	X	X		
Cenchrus echinatus L.; 33952			X^{r}	X^{bp}	X	X		
Cenchrus spinifex Cav. [*Cenchrus incertus* M.A. Curtis]; 33817				X^{bp}	X	X		
***Chloris elata* Desv.; G.N. Avery 1936; 1978 (USF)**								
**Cynodon dactylon* (L.) Pers.; 33768				X^{bp}		X		
**Dactyloctenium aegyptium* (L.) Willd. ex Asch. & Schweinf.; FLEPPC II; 33344				X, X^{bp}	X	X		
Digitaria ciliaris (Retz.) Koeler var. *ciliaris*; 33345	X^{r}			X^{bp}	X	X		
***Digitaria insularis* (L.) Fedde [*Trichachne insularis* (L.) Nees]; O. Lakela & L. Pardue 31593; 1968 (USF)**								
Distichlis spicata (L.) Greene; 34731			X					

	RH	Man	Rock	Rud	Pow	Dist	Subm	Berm
Echinochloa colona* (L.) Link; **Rare; 34558				X,X^{bp}				
Echinochloa crus-galli* (L.) P. Beauv.; **Rare; 34559				X^{bp}		X		
**Eleusine indica* (L.) Gaertn.; 33346				X,X^{bp}	X	X		
Eragrostis amabilis* (L.) Wight & Arn. ex Hook. & Arn.; **Rare; 34868				X				
**Eragrostis ciliaris* (L.) R.Br. var. *ciliaris* ; 34579				X,X^{bp}	X	X		
Eragrostis ciliaris* (L.) R.Br. var. *laxa* Kuntze; **Rare; 34163				X^{bp}				
Eragrostis elliottii S. Watson; 34082				X^{bp}	X	X		
**Eremochloa ophiuroides* (Munro) Hack.; 34103				X^{bp}				
Eustachys petraea (Sw.) Desv.; 33655	X^{r}			X^{bp}	X	X		
**Heteropogon contortus* (L.) P. Beauv. ex Roem. & Schult.; 33734				X^{bp}	X			
**Hyparrhenia rufa* (Nees) Stapf; FLEPPC II; 34473	X^{r}				X			
Lasiacis divaricata (L.) Hitchc.; 33517	X			X^{bp}	X	X		
Leptochloa fusca (L.) Kunth subsp. *fascicularis* (Lam.) N. Snow; **Rare;** 35160						X		
Leptochloa dubia (Kunth) Nees; 33451					X	X		
**Melinis repens* (Willd.) Zizka [*Rhynchelytrum repens* (Willd.) C.E. Hubb.]; FLEPPC I; 33821				X,X^{bp}	X	X		
Monanthochloe littoralis Englem.; **Rare;** 35399						X		
Muhlenbergia capillaris (Lam.) Trin.; **Rare;** 34164				X				
**Neyraudia reynaudiana* (Kunth) Keng ex Hitchc.; FLEPPC I; 34368	X^{d}			X^{bp}		X		
Oplismenus hirtellus (L.) P. Beauv.; 35232	X							
Panicum dichotomiflorum Michx. var. *bartowense* (Scribn. & Merr.) Fernald; **Rare;** 34557				X^{bp}	X			
*'*Panicum maximum* Jacq.; FLEPPC II; 34278	X^{r}				X	X		
Panicum repens* L.; **Rare; FLEPPC I; 34104						X		
Panicum virgatum L.; **Rare;** 34369	X							
Paspalum blodgettii Chapm.; 33818				X^{bp}	X	X		
Paspalum caespitosum Flüggé; **Rare;** 34477				X^{bp}				
****Paspalum fimbriatum* Kunth; O. Lakela & F. Almeda 30463; 1966 (USF)**								
**Paspalum notatum* Flüggé var. *notatum;* 33820				X^{bp}				
Paspalum setaceum Michx. var. *longipedunculatum* (Leconte) Alph. Wood; 34419				X^{bp}				
Paspalum setaceum Michx. var. *stramineum* (Nash) D.J. Banks; 33452					X	X		
Paspalum vaginatum Sw.; 33769						X		
Pennisetum purpureum* Schumach.; **Rare; FLEPPC I; 34398				X^{bp}				
Pennisetum setaceum* (Forssk.) Chiov.; **Rare; FLEPPC II; 34537				X^{bp}				
**Rottboellia cochinchinensis* (Lour.) Clayton; 33552				X^{bp}	X	X		
Schizachyrium sanguineum (Retz.) Alston var. *sanguineum;* 33642					X	X		
Setaria macrosperma (Scribn. & Merr.) K. Schum.; 34736	X							X, X^{rb}
Setaria parviflora (Poir.) Kerguélen [*Setaria geniculata* P. Beauv.]; 33454				X^{bp}	X	X		
Sorghum halepense* (L.) Pers.; **Rare; 34985				X				
Spartina spartinae (Trin.) Merr. ex Hitchc.; 33972		X^{r}	X					
Sporobolus domingensis (Trin.) Kunth; 33832						X		
**Sporobolus jacquemontii* Kunth; 33927				X^{bp}	X			
Sporobolus pyramidatus (Lam.) Hitchc.; 33928						X		
Sporobolus virginicus (L.) Kunth; 33553		X	X			X		
Stenotaphrum secundatum (Walter) Kuntze; **Rare;** 33547						X		
Urochloa adspersa (Trin.) R.D. Webster; 34799					X	X		
**Urochloa distachya* (L.) T.Q. Nguyen [*Urochloa subquadripara* (Trin.) R.D. Webster]; 33656					X	X		
**Zoysia pacifica* (Goudswaard) M. Hotta & Kuroki; 34400	X^{r}			X^{bp}		X		

	RH	Man	Rock	Rud	Pow	Dist	Subm	Berm
RUPPIACEAE (1, 1)								
Ruppia maritima L.; 33512							X	
RUSCACEAE (1, 1)								
**Sansevieria hyacinthoides* (L.) Druce; FLEPPC II; 33738	X,X^{po},X^{rb}				X			
SMILACACEAE (1, 1)								
Smilax havanensis Jacq.; 34904	X^{pi},X^{r}							
DICOTYLEDONS SENSU LATO (230, 307; *245,327*)								
ACANTHACEAE (2, 3; *3, 4*)								
****Asystasia gangetica* (L.) T. Anderson; K.A. Bradley 1367; 1998 (FTG)**								
Dicliptera sexangularis (L.) Juss.; 34450	X^{r}					X		
Ruellia blechum* L. [*Blechum pyramidatum* (Lam.) Urb.]; **Rare; FLEPPC II; 34539				X^{bp}		X		
Ruellia ciliatiflora* Hook.; **Rare; 34106				X^{bp}				
AIZOACEAE (2, 2)								
Sesuvium portulacastrum (L.) L.; 33482			X	X		X		X
Trianthema portulacastrum L.; **Rare;** 35193						X		
AMARANTHACEAE (4, 6; *5, 7*)								
Alternanthera flavescens Kunth; 33516	X,X^{r}		X	X		X		X
Amaranthus dubius* Mart. ex Thell.; **Rare; 34401						X		
Amaranthus spinosus* L.; **Rare; 34562				X^{bp}				
**Amaranthus viridis* L.; 34600				X	X	X		
*Blutaparon vermic*ulare (L.) Mears; 33483			X			X		
Celosia nitida Vahl; **Rare;** 35362	X							
***Iresine diffusa* Humb. & Bonpl. ex Willd.; R.W. Long 2981; 1969 (USF)**								
ANACARDIACEAE (3, 3)								
Metopium toxiferum (L.) Krug & Urb.; 33286	X^{pi}, X^{r}		X,X^{r}	X		X		X
**Schinus terebinthifolia* Raddi; FLEPPC I; 33484	X, X^{pi}					X		X
Toxicodendron radicans (L.) Kuntze; **Rare;** 33772	X^{r}					X		
ANNONACEAE (1, 1)								
Annona glabra L.; 34420	X,X^{pi}							
APIACEAE (1, 1)								
**Cyclospermum leptophyllum* (Pers.) Sprague ex Britton & P. Wilson; 34454				X,X^{bp}				
APOCYNACEAE (5, 5; *7, 7*)								
****Carissa macrocarpa* (Eckl.) A. DC.; R.W. Long, F. Almeda, J. De Boer, C.R. Broome 1769; 1966 (USF)**								
Catharanthus roseus* (L.) G. Don; **Rare; 33554						X		
Echites umbellatus Jacq.; 33645	X^{r}				X	X		
****Nerium oleander* L.; F. Almeda, J. De Boer, C.R. Broome, R.W. Long 1764; 1966 (USF)**								
Pentalinon luteum (L.) B. F. Hansen & Wunderlin; 33385	X^{pi},X^{r}	X^{r}				X		
Rhabdadenia biflora (Jacq.) Müll. Arg.; 33623	X		X					
Vallesia antillana Woodson; **Rare;** 34541	X							
ASCLEPIADACEAE (2, 3; *3, 4*)								
****Cryptostegia madagascariensis* Bojer ex Decne.; F. Almeda, J. De Boer, C.R. Broome, R.W. Long 1761; 1966 (USF)**								
Cynanchum angustifolium Pers.; 33386		X,X^{r}				X		
Cynanchum scoparium; **Rare;** 35111	X							X^{rb}
Sarcostemma clausum (Jacq.) Roem. & Schult.; **Rare;** 33555	X^{r}					X		
ASTERACEAE (23, 29; *24, 33*)								
Ambrosia artemisiifolia L.; **Rare;** 33773						X		
Baccharis angustifolia Michx.; 34171		X^{r}						
Baccharis glomeruliflora Pers.; **Rare;** 34289						X		
Baccharis halimifolia L.; 34109		X^{r}				X		
Bidens alba (L.) DC.; 33828				X,X^{bp}	X	X		
Borrichia arborescens (L.) DC.; 33387		X^{r}	X					
Borrichia frutescens (L.) DC.; 33350		X	X	X		X		X
**Calyptocarpus vialis* Less.; 34650				X		X^{bp}		
Chromolaena odorata (L.) R.M. King & H. Rob.; 34421	X					X		
Conyza canadensis (L.) Cronquist; 34907				X	X	X		
Cyanthillium cinereum* (L.) H. Rob. [*Vernonia cinerea* (L.) Less.]; **Rare; 34823					X	X		

	RH	Man	Rock	Rud	Pow	Dist	Subm	Berm
Eclipta prostrata (L.) L.; **Rare;** 33829				X				
Emilia fosbergii Nicolson; **Rare;** 33905						X		
Erechtites hieraciifolius (L.) Raf. ex DC.; **Rare;** 34824				X^{bp}				
Eupatorium capillifolium (Lam.) Small ex Porter & Britton; 34293						X		
***Eupatorium serotinum* Michx.; R.W. Long, F. Almeda, J. De Boer, C.R. Broome 1781; 1966 (USF)**								
Flaveria linearis Lag.; 33667				X		X		
Flaveria trinervia (Spreng.) C. Mohr; 33669				X		X		
****Helianthus annuus* L.; D.S. Correll 48116; 1977 (FTG)**								
Launaea intybacea* (Jacq.) Beauverd; **Rare; 35410						X		
Melanthera nivea (L.) Small; 33668						X		
Mikania scandens (L.) Willd.; **Rare;** 35307		X^{r}						
**Parthenium hysterophorus* L.; 33351				X^{bp}		X		
Pectis glaucescens (Cass.) D.J. Keil; 33830						X		
***Pectis ×floridana* D.J. Keil; G.A. Gann, K.A. Bradley 151; 1995 (FTG)**								
Pluchea carolinensis (Jacq.) G. Don; 33877				X^{bp}		X		
***Pluchea odorata* (L.) Cass.; R.W. Long, F. Almeda, J. De Boer, C.R. Broome 1841; 1966 (USF)**								
Sonchus asper* (L.) Hill; **Rare; 34565				X^{bp}				
**Sonchus oleraceus* L.; 33352				X^{bp}		X		
**Sphagneticola trilobata* (L.) Pruski [*Wedelia trilobata* (L.) Hitchc.]; FLEPPC II; 33721				X				
Symphyotrichum bahamense (Britton) G.L. Nesom [*Symphyotrichum subulatum* var. *elongatum* (Bosserdet ex A.G. Jones & Lowry) S.D. Sundberg.]; 34108				X				
Symphyotrichum tenuifolium (L.) G.L. Nesom [*Symphyotrichum bracei* (Britton ex Small) G.L. Nesom]; 34107		X^{r}						
**Tridax procumbens* L.; 33879				X,X^{bp}		X		
AVICENNIACEAE (1, 1)								
Avicennia germinans (L.) L.; 34183	X	X	X			X		X^{man}
BATACEAE (1, 1)								
Batis maritima L.; 33545		X	X			X		X
BIGNONIACEAE (1, 1)								
Tecoma stans* (L.) Juss. ex Kunth; **Rare; 33556	X^{d}							
BORAGINACEAE (5, 7)								
Argusia gnaphalodes (L.) Heine; 34651						X		
Bourreria succulenta Jacq. [*Bourreria ovata* Miers]; 34070	X					X		
**Cordia sebestena* L.; 34944	X^{rb}		X					X
Heliotropium angiospermum Murray; 34456	X^{r}			X^{bp}	X	X		X
Heliotropium curassavicum L.; 33847		X	X	X		X		
Heliotropium procumbens* Mill.; **Rare; 34528				X^{bp}		X		
Tournefortia volubilis L.; 33337	X^{r}				X	X		
BRASSICACEAE (2, 2)								
Brassica juncea* (l.) Czern.; **Rare; 34637						x		
Lepidium virginicum L.; 33627				X^{bp}	X	X		
BURSERACEAE (1, 1)								
Bursera simaruba (L.) Sarg.; 33543	X,X^{r}					X		X
CACTACEAE (5, 7)								
Acanthocereus tetragonus (L.) Hummelinck; 34494	X,X^{man},X^{r}		X					X
¤ *Harrisia fragrans* Small ex Britton & Rose; 34493	X,X^{man},X^{rb}		X					
Hylocereus undatus* (Haw.) Britton & Rose; **Rare; 35090	X^{r}							
Opuntia cochenillifera* (L.) Mill.; **Rare; 34249						X		
¤ *Opuntia corallicola* (Small) Werderm.; 35494 (photograph)	X							
Opuntia stricta (Haw.) Haw.; 34435	X,X^{rb}	X	X			X		X
Selenicereus pteranthus* (Link & Otto) Britton & Rose; **Rare; 34825	X^{d}							
CANELLACEAE (1, 1)								

	RH	Man	Rock	Rud	Pow	Dist	Subm	Berm
Canella winterana (L.) Gaertn.; 34250	X,X^{man},X^{po}							
CAPPARACEAE (1, 2)								
Capparis flexuosa (L.) L.; 34422	X,X^{man},X^{r},X^{rb}	X	X					X
Capparis jamaicensis Jacq. [*Capparis cynophallophora* L.]; 33806	X,X^{man},X^{po}	X	X					X
CARICACEAE (1, 1)								
Carica papaya L.; 33629	X,X^{po}				X			X
CASUARINACEAE (1, 1)								
Casuarina equisetifolia* L.; **Rare; FLEPPC I; 33671						X		
CELASTRACEAE (4, 5)								
Crossopetalum ilicifolium (Poir.) Kuntze; **Rare;** 34372	X^{pi}							
Crossopetalum rhacoma Crantz; 34583	X,X^{pi},X^{r},X^{rb}							
Hippocratea volubilis L.; 33628	X,X^{man},X^{pi}	X						
Maytenus phyllanthoides Benth.; 34543		X						
Schaefferia frutescens Jacq.; 34194	X, X^{po}, X^{r}							
CELTIDACEAE (1, 2)								
Trema lamarckiana (Schult.) Blume; **Rare;** 34334						X		
Trema micrantha (L.) Blume; 33509	X^{r}			X^{bp}		X		
CHENOPODIACEAE (5, 5)								
Atriplex pentandra (Jacq.) Standl. [*Atriplex cristata* Humb. & Bonpl. ex Willd.]; 33490	X^{rb}		X					
?*Chenopodium* sp. (Nonfruiting specimen); **Rare;** 35170						X		
Salicornia bigelovii Torr.; 33357						X		
Sarcocornia ambigua (Michx.) M.A. Alonso & M.B. Crespo [*Sarcocornia perennis* (Mill.) A.J. Scott]; 33356		X	X	X		X		
Suaeda linearis (Elliott) Moq.; 33491			X			X		X
CHRYSOBALANACEAE (1, 1)								
Chrysobalanus icaco L.; **Rare;** 34999	X^{pi}							
COMBRETACEAE (3, 4; *4, 5*)								
Conocarpus erectus L.; 33492	X,X^{pi}	X	X	X		X		X^{man}
Conocarpus erectus L. var. *sericeus* DC.; **Rare;** 34373		X				X		
Laguncularia racemosa (L.) C.F. Gaertn.; 34185		X	X			X		
***Terminalia buceras (L.) C. Wright [Bucida buceras* L.]; F.C. Craighead s.n.; 1961 (USF)**								
Terminalia catappa* L.; **Rare; FLEPPC II; 33742	X^{d}							
CONVOLVULACEAE (6, 14)								
Dichondra sp. (sterile); **Rare;** 34620				X^{bp}				
Evolvulus alsinoides (L.) L.; 34735				X^{bp}	X			
Ipomoea alba L.; 33558					X	X		
Ipomoea hederifolia L.; **Rare;** 35412						X		
Ipomoea imperati (Vahl) Griseb.; **Rare;** 33673						X		
Ipomoea indica (Burm.) Merr.; 34374	X, X^{r}			X^{bp}	X	X		
Ipomoea pes-caprae (L.) R.Br.; 33646			X	X		X		
Ipomoea sagittata Poir.; **Rare;** 33390	X^{pi}	X^{r}						
**Ipomoea triloba* L.; 33674				X^{bp}	X	X		
Ipomoea violacea L.; 33743		X^{r}						X
Jacquemontia havanensis (Jacq.) Urb.; **Rare;** 33391	X^{r}							
Jacquemontia pentanthos (Jacq.) G. Don; **Rare;** 34322						X		
Merremia dissecta* (Jacq.) Hallier f.; **Rare; 33861	X^{r}					X		
Turbina corymbosa (L.) Raf.; **Rare;** 35309						X		
CRASSULACEAE (1, 1)								
**Kalanchoe delagoensis* Eckl. & Zeyh.; 33863						X		
EUPHORBIACEAE sensu lato (10, 21)								
¤ *Argythamnia blodgettii* (Torr. ex Chapm.) Chapm.; **Rare;** 34926					X			
Caperonia castaneifolia (L.) A. St.-Hil.; **Rare;** 33956				X^{bp}				
Chamaesyce blodgettii (Engelm. ex Hitchc.) Small; 33881				X,X^{bp}	X	X		
¤ *Chamaesyce conferta* Small; 34883				X,X^{bp}		X		
Chamaesyce hirta (L.) Millsp.; 33882				X,X^{bp}	X	X		

	RH	Man	Rock	Rud	Pow	Dist	Subm	Berm
Chamaesyce hypericifolia (L.) Millsp.; 33907				X,X^{bp}	X	X		
**Chamaesyce mendezii* (Boiss.) Millsp.; 34405				X^{bp}	X	X		
Chamaesyce mesembrianthemifolia (Jacq.) Dugand; 34072		X^{d}				X		
Chamaesyce ophthalmica (Pers.) D.G. Burch; 33358				X,X^{bp}	X	X		
Chamaesyce prostrata (Aiton) Small; 33395				X,X^{bp}	X	X		
Drypetes diversifolia Krug & Urb.; 33542	X,X^{pi},X^{po},X^{r}					X		X
Drypetes lateriflora (Sw.) Krug & Urb.; 34487	X							
**Euphorbia graminea* Jacq.; 33885				X^{bp}	X	X		
Euphorbia trigona* Haw.; **Rare; 34412	X							
Gymnanthes lucida Sw.; 34681	X, X^{po}, X^{r}							
Hippomane mancinella L.; **Rare;** 34692								X
**Phyllanthus amarus* Schumach. & Thonn.; 33397				X^{bp}		X		
**Phyllanthus tenellus* Roxb.; 33632						X		
Poinsettia cyathophora (Murray) Bartl.; 33497				X,X^{bp}	X	X		
Poinsettia heterophylla (L.) Klotzsch & Garcke ex Klotzsch; **Rare;** 34587				X^{bp}	X			
Ricinus communis* L.; **Rare; FLEPPC II; 33633				X^{bp}		X		
FABACEAE (31, 43; *32, 44*)								
Acacia choriophylla Benth.; **Rare;** 34628	X							
Acacia farnesiana (L.) Willd.; 33729	X							
Acacia pinetorum F.J. Herm.; **Rare;** 34529	X^{r}							
Albizia lebbeck* (L.) Benth.; **Rare; FLEPPC I; 34458	X^{d}							
**Alysicarpus vaginalis* (L.) DC.; 34910				X^{bp}				
Caesalpinia bonduc (L.) Roxb.; 33779	X	X				X		X
Cajanus cajan* (L.) Huth; **Rare; 34659						X		
Canavalia rosea (Sw.) DC.; 33780		X^{r}				X		
***Centrosema virginianum* (L.) Benth.; F. Almeda, J. De Boer, C.R. Broome, R.W. Long 1742; 1966 (USF)**								
Chamaecrista nictitans (L.) Moench var. *aspera* (Muhl. ex Elliott) H.S. Irwin & Barneby; **Rare;** 34199					X			
Clitoria ternatea* L.; **Rare; 33560						X		
Crotalaria incana* L.; **Rare; 34721					X	X		
Crotalaria pumila Ortega; 33293				X				
Crotalaria spectabilis* Roth; **Rare; 33908						X		
Dalbergia brownei (Jacq.) Schinz; 34295	X, X^{r}	X^{r}	X					
Dalbergia ecastaphyllum (L.) Taub.; 33398	X,X^{man}	X^{r}						
Delonix regia* (Bojer ex Hook.) Raf.; **Rare; 34912	X^{po},X^{r}							
**Desmanthus leptophyllus* Kunth; 33539					X			
Desmanthus virgatus (L.) Willd.; 33701				X^{bp}	X			
**Desmodium incanum* DC.; 34888				X^{bp}	X	X		
**Desmodium tortuosum* (Sw.) DC.; 33746					X	X		
**Desmodium triflorum* (L.) DC.; 34739				X^{bp}				
Erythrina herbacea L.; **Rare;** 35383	X							
Galactia striata (Jacq.) Urb.; 34299	X^{r}				X	X		X
**Indigofera spicata* Forssk.; 34520				X,X^{bp}		X		
Indigofera tinctoria* L.; **Rare; 34325						X		
**Leucaena leucocephala* (Lam.) de Wit; FLEPPC II; 34187						X		
Lysiloma latisiliquum (L.) Benth.; 33959	X,X^{pi},X^{r}					X		
**Macroptilium lathyroides* (L.) Urb.; 34117			X^{r}			X		
**Melilotus albus* Medik.; 34544				X^{bp}		X		
Neptunia pubescens Benth.; 33537				X,X^{bp}				
Parkinsonia aculeata* L.; **Rare; 34238				X				
Piscidia piscipula (L.) Sarg.; 33886	X			X^{bp}	X	X		
Pithecellobium keyense Britton ex Britton & Rose; 34459	X,X^{pi},X^{r}		X			X		
Pithecellobium unguis-cati (L.) Benth.; 34691	X,X^{r}		X			X		X
Rhynchosia minima (L.) DC.; 33363				X^{bp}	X	X		
Rhynchosia swartzii (Vail) Urb.; 34376	X,X^{d},X^{po},X^{r}					X		
Senna ligustrina (L.) H.S. Irwin & Barneby; 34803					X			
Senna obtusifolia* (L.) H.S. Irwin & Barneby; **Rare; 33912				X^{bp}				

	RH	Man	Rock	Rud	Pow	Dist	Subm	Berm
Sesbania vesicaria (Jacq.) Elliott; **Rare;** 35183					X			
Sophora tomentosa L.; 33535	X^{pi},X^{r}	X^{r},X^{rb}	X					
**Stylosanthes hamata* (L.) Taub.; 34407						X		
Tamarindus indica* L.; **Rare; 34950	X							
Vigna luteola (Jacq.) Benth.; 33784						X		
FAGACEAE (1, 1)								
Quercus virginiana Mill.; 34200	X^{pi}							
GENTIANACEAE (3, 3)								
Eustoma exaltatum (L.) Salisb. ex G. Don; 33887				X^{bp}		X		
Sabatia stellaris Pursh; 33677	X^{pi}			X				
Voyria parasitica (Schltdl. & Cham.) Ruyters & Maas [*Leiphaimos parasitica* Schltdl. & Cham.]; 34026	X							
GOODENIACEAE (1, 2)								
**Scaevola taccada* (Gaertn.) Roxb. var. *sericea* (Vahl) H. St. John; FLEPPC I; 34607						X		
Scaevola taccada* (Gaertn.) Roxb. var. *taccada*; **Rare; FLEPPC I; 33869		X^{r}				X		
HYDROPHYLLACEAE (1, 1)								
Nama jamaicensis* L.; **Rare; 34517				X^{bp}				
LAMIACEAE (2, 2; 3, 3)								
Callicarpa americana L.; 33902					X	X		
Hyptis mutabilis* (Rich.) Briq.; **Rare; 34666				X^{bp}				
***Vitex trifolia* L.; G.A. Gann, J.A. Duquesnel 1159; 2003 (FTG)**								
LAURACEAE (1, 1)								
Ocotea coriacea (Sw.) Britton; 33915	X^{r}							
MALPIGHIACEAE (1, 1)								
Byrsonima lucida (Mill.) DC.; 34812	X^{pi}, X^{r}							
MALVACEAE (7, 9)								
Abutilon permolle (Willd.) Sweet; **Rare;** 34773						X		X
Gossypium hirsutum L.; 34379	X^{rb}	X				X		
Herissantia crispa (L.) Brizicky; 34829				X,X^{bp}	X	X		
Hibiscus rosa-sinensis* L. var. *rosa-sinensis*; **Rare; 34326	X^{r}							
Malvastrum corchorifolium (Desr.) Britton ex Small; 34423				X	X	X		
Sida antillensis Urb.; 34591				X^{bp}	X	X		
Sida ciliaris L.; 34891				X^{bp}		X		
Sida* sp. (apparently new to Florida); **Rare; 33747						X		
**Thespesia populnea* (L.) Sol. ex Corrêa; FLEPPC I; 33401	X	X^{r}	X					X,X^{rb}
MELIACEAE (1, 1; 2, 2)								
***Melia azedarach* L.; R.P. Sauleda, D.K. Sauleda 4742; 1981 (FTG)**								
Swietenia mahagoni (L.) Jacq.; 33617	X, X^{pi}	X^{r}	X			X		X
MORACEAE (1, 3)								
Ficus aurea Nutt.; 34188	X,X^{pi},X^{r}	X^{d}				X		X^{man}
Ficus citrifolia Mill.; 34382	X^{r}							X
Ficus microcarpa* L. f.; **Rare; FLEPPC I; 34462	X							
MYRICACEAE (1, 1)								
Myrica cerifera L.; 34202	X^{pi}					X		
MYRSINACEAE (2, 2)								
Ardisia escallonioides Schiede & Deppe ex Schltdl. & Cham.; 33618	X,X^{pi}					X		
Myrsine cubana A. DC. [*Rapanea punctata* (Lam.) Lundell]; 33712	X, X^{pi}							
MYRTACEAE (2, 6)								
Calyptranthes pallens Griseb.; 33580	X,X^{pi},X^{po},X^{r}					X		
Calyptranthes zuzygium (L.) Sw.; 34056	X,X^{pi}							
Eugenia axillaris (Sw.) Willd.; 34439	X,X^{pi},X^{r}					X		X
Eugenia confusa DC.; 34208	X,X^{man}					X		
Eugenia foetida Pers.; 33891	X,X^{pi}		X			X		X
Eugenia rhombea Krug & Urb. ex Urb.; **Rare;** 34531	X							

	RH	Man	Rock	Rud	Pow	Dist	Subm	Berm
NYCTAGINACEAE (4, 4)								
Boerhavia diffusa L.; **Rare;** 34029				X,X^{bp}				
Bougainvillea glabra* Choisy; **Rare; 34440	X^{r}							
Guapira discolor (Spreng.) Little; 34032	X,X^{d},X^{pi},X^{r}	X^{d},X^{r}	X,X^{r}			X		X
Pisonia aculeata L.; 34953	X,X^{r}				X			X
OLEACEAE (1, 1)								
Jasminum dichotomum* Vahl; **Rare; FLEPPC I; 33785	X^{r}							
ONAGRACEAE (1, 1)								
Gaura angustifolia Michx.; **Rare;** 33786						X		
OXALIDACEAE (1, 1)								
Oxalis corniculata L.; 33637				X^{bp}		X		
PAPAVERACEAE (1, 1)								
Argemone mexicana L.; 33750				X^{bp}		X		
PASSIFLORACEAE (1, 2)								
Passiflora multiflora L.; 34514	X,X^{po},X^{r}					X		
Passiflora suberosa L.; 33529	X			X,X^{bp}	X	X		X
PHYTOLACCACEAE (1, 1; *2, 2*)								
***Phytolacca americana* L.; R.W. Long, F. Almeda, J. De Boer, C.R. Broome 1843; 1966 (USF)**								
Rivina humilis L.; 33814	X^{r},X^{man}		X			X		X
PITTOSPORACEAE (1, 1)								
Pittosporum* sp. (sterile); **Rare; 33880	X^{d}							
PLANTAGINACEAE (1, 1)								
Plantago major* L.; **Rare; 34549				X^{bp}				
PLUMBAGINACEAE (1, 1)								
Limonium carolinianum (Walter) Britton; 33870		X	X			X		
POLYGONACEAE (1, 2)								
Coccoloba diversifolia Jacq.; 33916	X, X^{pi}, X^{r}					X		X
Coccoloba uvifera (L.) L.; 33527	X^{man},X^{pi},X^{r}	X^{r}						X
PORTULACACEAE (2, 2)								
Portulaca oleracea L.; 33680				X,X^{bp}		X		
Talinum fruticosum* (L.) Juss.; **Rare; 34071						X		
RHAMNACEAE (4, 5; *4, 6*)								
**Colubrina asiatica* (L.) Brongn.; FLEPPC I; 33754	X		X	X^{bp}		X		X
***Colubrina cubensis* (Jacq.) Brongn. var. *floridana* M.C. Johnst.; F.C. Craighead s.n.; 1961 (USF)**								
Colubrina elliptica (Sw.) Brizicky & W.L. Stern; 34175	X^{r}							
Gouania lupuloides (L.) Urb.; 33502	X^{po},X^{r}				X	X		X
Krugiodendron ferreum (Vahl) Urb.; 33713	X,X^{man},X^{po},X^{r}	X^{d}				X		X
Reynosia septentrionalis Urb.; 34834	$X,X^{man},X^{pi},X^{r},X^{rb}$					X		
RHIZOPHORACEAE (1, 1)								
Rhizophora mangle L.; 33815	X^{1}	X	X					X
RUBIACEAE (12, 16)								
Chiococca alba (L.) Hitchc.; 33917	X,X^{d},X^{pi},X^{r}			X	X	X		X
Erithalis fruticosa L.; 34489	X^{pi}, X^{r}	X^{r}	X			X		
Ernodea cokeri Britton ex Coker; 34394	$X^{pi}, X^{pi\text{-}r}$							
Exostema caribaeum (Jacq.) Schult.; 34445	X^{po},X^{r}							
Guettarda elliptica Sw.; 33892	X,X^{po},X^{r}					X		
Guettarda scabra (L.) Vent.; 33757	X,X^{po},X^{r}					X		
Hamelia patens Jacq.; 33730	X^{r}				X			
Morinda royoc L.; 33461	X,X^{pi},X^{r}			X	X	X		
Oldenlandia corymbosa* L.; **Rare; 34409				X^{bp}				
Psychotria ligustrifolia (Northr.) Millsp. [*Psychotria bahamensis* Millsp.]; 34816	X,X^{pi},X^{po},X^{r}					X		
Psychotria nervosa Sw.; 33919	X,X^{r}					X		
Randia aculeata L.; 33410	X,X^{man},X^{pi}	X,X^{r}						
Richardia grandiflora* (Cham. & Schltdl.) Schult. & Schult. f.; **Rare; 34918				X^{bp}	X			
Spermacoce remota Lam. [*Spermacoce assurgens* Ruiz & Pav.]; 33893				X^{bp}	X	X		
Spermacoce tetraquetra A. Rich.; 33564					X			
**Spermacoce verticillata* L.; 33897				X	X	X		

	RH	Man	Rock	Rud	Pow	Dist	Subm	Berm
RUTACEAE (3, 3)								
Amyris elemifera L.; 33966	X,X^{po},X^{r}							X
Citrus* sp. (sterile); **Rare; 34428	X^{r}							
Zanthoxylum fagara (L.) Sarg.; 33524	X,X^{man},X^{po},X^{r}					X		X
SALICACEAE (1, 1)								
Flacourtia indica* (Burm. f.) Merr.; **Rare; FLEPPC II; 34461	X							
SAMOLACEAE (1, 1)								
Samolus ebracteatus Kunth; **Rare;** 33369						X		
SAPINDACEAE (5, 6; *5, 7*)								
Cardiospermum corindum L.; 33797	X^{d},X^{r}				X	X		X
***Cardiospermum microcarpum* Kunth.; F.C. Craighead s.n.; 1962 (USF)**								
Dodonaea elaeagnoides Rudolphi ex Ledeb. & Alderstam; 33799	X^{pi},X^{r}	X^{r}						
Dodonaea viscosa Jacq.; **Rare;** 33507	X^{r}							
Exothea paniculata (Juss.) Radlk.; 34465	X, X^{r}					X		X
Hypelate trifoliata Sw.; 34598	X,X^{po},X^{r}					X		
Sapindus saponaria L.; 33731	X,X^{po},X^{r},X^{rb}							X
SAPOTACEAE (3, 6)								
Chrysophyllum oliviforme L.; 33523	X,X^{r}							
Manilkara jaimiqui (C. Wright ex Griseb.) Dubard; 33698	X,X^{pi}	X^{r}	X					
**Manilkara zapota* (L.) P. Royen; FLEPPC I; 34432	X							
Sideroxylon celastrinum (Kunth) T.D. Penn.; 33412	X,X^{pi}	X	X					X
Sideroxylon foetidissimum Jacq. [*Mastichodendron foetidissimum* (Jacq.) H.J. Lam.; 34364	X,X^{po}							
Sideroxylon salicifolium (L.) Lam.; 33800	X,X^{r}					X		
SCHOEPFIACEAE (1, 1)								
Schoepfia chrysophylloides (A. Rich.) Planch.; 34267	X							
SCROPHULARIACEAE sensu lato (7, 7)								
Agalinis maritima (Raf.) Raf.; 34067	X$^{pi\ (in\ opening)}$	X						
Bacopa monnieri (L.) Pennell; 34068				X^{bp}				
Buchnera americana L.; **Rare;** 34047						X		
Capraria biflora L.; 33371				X,X^{bp}	X	X		
Mecardonia procumbens (Mill.) Small; **Rare;** 34777				X^{bp}				
**Russelia equisetiformis* Schltdl. & Cham.; 33899						X		
Scoparia dulcis L.; **Rare;** 35251				X				
SIMAROUBACEAE (1, 1)								
Simarouba glauca DC.; 33900	X					X		
SOLANACEAE (3, 7; *6, 10*)								
***Capsicum annuum* L. var. *glabriusculum* (Dunal) Heiser & Pickersgill; J.E. Poppleton & A.G. Shuey s.n.; 1974 (USF)**								
***Datura metel* L.; G.A. Gann, J.A. Duquesnel 1152; 2003 (FTG)**								
Lycium carolinianum Walter; 33874		X,X^{r}	X			X		X
***Nicotiana tabacum* L.; F. Almeda, J. De Boer, C.R. Broome, R.W. Long 1758; 1966 (USF)**								
Physalis pubescens L.; **Rare;** 34978								X
Solanum americanum Mill.; **Rare;** 33762						X		X
Solanum bahamense L.; **Rare;** 34727						X		
Solanum donianum Walp.; **Rare;** 33801						X		
Solanum erianthum D. Don; 34835				X	X	X		
Solanum lycopersicum* L. [*Lycopersicon esculentum* Mill.]; **Rare; 33732						X		
STERCULIACEAE (2, 2; *3, 3*)								
***Ayenia euphrasiifolia* Griseb.; G.A. Gann, J.A. Duquesnel 1140; 2003 (FTG)**								
Melochia corchorifolia* L.; **Rare; 35181				X				
Waltheria indica L.; 34850				X^{bp}	X	X		
STRYCHNACEAE (1, 1)								
Spigelia anthelmia L.; 34189				X,X^{bp}	X			
SURIANACEAE (1, 1)								
Suriana maritima L.; 33802		X^{d}				X		
TETRACHONDRACEAE (1, 1)								

	RH	Man	Rock	Rud	Pow	Dist	Subm	Berm
Polypremum procumbens L.; 33489				X,X^{bp}				
THEOPHRASTACEAE (1, 1)								
Jacquinia keyensis Mez; 35034	X^{pi}		X					
TILIACEAE (1, 1)								
Corchorus siliquosus L.; 34524						X		
TURNERACEAE (1, 1)								
**Turnera ulmifolia* L.; 33689					X	X		
URTICACEAE (2, 3)								
Parietaria floridana Nutt.; **Rare;** 34629				X^{bp}				
Parietaria praetermissa Hinton; **Rare;** 33766		X^{r}						
Pilea microphylla (L.) Liebm.; **Rare;** 35182				X				
VERBENACEAE (6, 8)								
Citharexylum spinosum L.; 33804	X^{r}					X		
Duranta erecta* L.; **Rare; 33693	X^{r}							
**Lantana camara* L.; FLEPPC I; 33415	X^{r}				X	X		
Lantana involucrata L.; 33372	X^{po},X^{r}					X		
Phyla nodiflora (L.) Greene; 33903				X^{bp}		X		
Priva lappulacea (L.) Pers.; 33767				X^{bp}		X		
Stachytarpheta cayennensis* (Rich.) Vahl; **Rare; FLEPPC II; 34550						X		
Stachytarpheta jamaicensis (L.) Vahl; 34610				X	X			
VISCACEAE (1, 1)								
Phoradendron rubrum (L.) Griseb.; 35495 (photograph)	X, X$^{pi\text{-}r}$							
VITACEAE (3, 3)								
Cissus verticillata (L.) Nicolson & C.E. Jarvis; **Rare;** 34980								X
Parthenocissus quinquefolia (L.) Planch.; 33510	X,X^{r}				X	X		
Vitis rotundifolia Michx.; 33904	X			X^{bp}	X	X		
XIMENIACEAE (1, 1)								
Ximenia americana L.; 34243	X,X^{pi},X^{r}					X		X
ZYGOPHYLLACEAE (3, 3)								
Guaiacum sanctum L.; 33921	X, X^{po}							
Kallstroemia maxima (L.) Hook. & Arn.; **Rare;** 34045				X^{bp}				
Tribulus cistoides* L.; **Rare; FLEPPC II; 33665						X		

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